of recycled alumina trihydrate seed into an aluminate liquor, in which particle size quality of alumina hydrate produced in the circuit and circulating in feed tanks is monitored, comprising the steps of:

a) a calibration step including:

a1) measuring, versus time, of:

cumulative percentage of alumina hydrate particles circulating in the feed tanks in the circuit that are finer than X2 µm, defined as CPFT X2; and

cumulative percentage of alumina hydrate particles circulating in the feed tanks in the circuit that are finer than X1 µm, defined as CPFT X1;

where X1 and X2 are predetermined particle sizes and X1 is smaller than X2; and

a2) determining a relationship R between CPFT X1 and later changes in CPFT X2, and defining upper and lower trigger thresholds of CPFT X1 which correspond to maximum permissible variations in CPFT X2; and

b) controlling the circuit, comprising measuring CPFT X2 and updating a correlation between CPFT X2 and the particle size of hydrate produced by the circuit, regularly measuring CPFT X1 and a regularly updating of the relationship R, and causing corrective action to the slurry at the beginning of precipitation when the measured value of CPFT X1

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reaches an updated trigger threshold.

8. (Amended) Process according to claim 7, wherein said corrective action includes modifying amount of solid in the slurry at the beginning of the precipitation.

9. (Amended) Process according to claim 8, wherein the modifying comprises varying amounts of aliquots of pregnant aluminate liquor feeding a first agglomeration tank and a first feed tank, respectively.

13. (Amended) Process according to claim 7, wherein said calibration step comprises:

1) daily measuring CPFT X1 in the slurry at any point of the feed tank series, which is used to produce a first particle size vs. time diagram represented by a curve Y = %<X1(t);

2) daily measuring CPFT X2 in the slurry at any point of the feed tank series, which is used to produce a second particle size vs. time diagram represented by a curve Y = %<X2(t) and in which X2 is a value already known for its good correlation with the particle size of the hydrate produced;

3) creating of an empirical relation between the particle size vs. time diagrams, which characterizes the relation R as:

$$R(\%<X2(t),\ \%<X1(t-\tau)) = 0$$

where t is the time at which CPFT X1 is measured and τ is a characteristic time interval estimated by observing an

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occurrence of a same accidental phenomenon on each curve $\%<X2(t)$ and $\%<X1(t-\tau)$; and

4) defining a maximum threshold and minimum threshold of CPFT X1 obtained from the relation R and a maximum interval of the permissible variation of values of CPFT X2.

14. (New) Process according to claim 13, wherein said controlling comprises:

1) daily measuring CPFT X1 in the slurry at any point in the feed tank series, in order to complete the first particle size time diagram represented by the curve $Y = \%<X1(t)$;

2) daily measuring CPFT X2 in the slurry at any point in the feed tank series, in order to complete the first particle size time diagram represented by the curve $Y = \%<X2(t)$;

3) updating of R and the definition of trigger thresholds of CPFT X1; and

4) triggering of a corrective action to modify amount of solid in the slurry at the beginning of the precipitation when the measured value of CPFT X1 reaches one of the thresholds defined in 3).

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